ACCESSION #: 8809290013

LICENSEE EVENT REPORT (LER)

FACILITY NAME: Catawba Nuclear Station, Unit 1 PAGE: 1 OF 5

DOCKET NUMBER: 05000413

TITLE: Technical Specification Violation Due to Failure to Retest a Containment Isolation Valve Because of a Management Deficiency

EVENT DATE: 08/11/88 LER #: 88-022-00 REPORT DATE: 09/16/88

OPERATING MODE: POWER LEVEL: 100

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR SECTION 50.73(a)(2)(i)

LICENSEE CONTACT FOR THIS LER:
NAME: Julio G. Torre, Associate Engineer, Licensing TELEPHONE: 704-373-8029

COMPONENT FAILURE DESCRIPTION:
CAUSE: SYSTEM: COMPONENT: MANUFACTURER:
REPORTABLE TO NPRDS:

SUPPLEMENTAL REPORT EXPECTED: No

ABSTRACT: On July 19, 1988, while a work request was being performed on the air regulator for a Feedwater Containment Isolation Bypass control valve, the regulator was found to be undersized. The regulator was replaced before the appropriate modification package had been developed and approved. No retest was performed following installation to verify the Containment Isolation valve properly closed within the allowable time. The failure to retest the Containment Isolation Valve resulted in a Technical Specification violation from July 22 to August 4, 1988. This event was determined to be reportable on August 19, 1988. The Unit was in Mode 1, Power Operation, at the time of the incident.

This incident has been attributed to a management deficiency, because a supervisor did not follow the appropriate procedure. The supervisor was informed a modification was required and should have returned the work request to Duke Power Planning personnel. Additionally, inadequate training was provided to Craft personnel on the modification process. The affected personnel did not have an adequate understanding of the program to ensure that the appropriate documentation was developed prior to modifying equipment. The effectiveness of existing modification training will be evaluated and enhancements will be made if appropriate. Also, appropriate Station groups will be informed of the current Performance retest determination philosophy. The health and safety of the public were unaffected by this event.

End of Abstract

BACKGROUND:

The modification program ensures that proper reviews, approvals, and documentation of proposed changes to the plant are performed before the change is installed. Work performed under the direction of a work request may allow temporary changes for troubleshooting but the changes may only be installed for one shift before it is either removed, or reviewed and approved to remain in place. The review process is generally started by the responsible group by originating a Station Problem Report, having it approved by their Management, and routing it to the Projects Services section for evaluation. The approval may take the form of a Temporary Modification, Variation Notice, or Nuclear Station Modification.

The Maintenance Work Request Program allows investigation and repair activities to take place, but is not intended to be used to change the as-built condition of the Station per Station Directive 54.4.1, Processing Design Changes. Technical Specification 3.6.3, Containment Isolation Valves, [EIIS:v] requires that Containment Isolation valves be verified operable prior to returning the valve to service after maintenance, repair or replacement work.

DESCRIPTION OF INCIDENT:

On February 17, 1988, Operations personnel initiated low priority work request to repair the air regulator [EIIS:RG] which supplied air to 1CF89, Steam Generator [EIIS:96] 1B Feedwater containment Isolation Bypass Control valve. The regulator was leaking an excessive amount of air. The work request was assigned to a Planner who was responsible for making the retest determination. Because 1CF89 is safety related and requires a retest after maintenance, the Planner discussed with other Planners whether working on the regulator for the air supply constituted working on the valve. The valve was determined to be a fail closed valve which closes on loss of air pressure. its safety related position is closed. They determined that in this situation the retest would not be required based on the valve type and that the regulator was merely an extension of the air supply system, which is non-safety related.

Because of its low priority, the work request was not sent to a crew for work until July 10, 1988. At this time, it was assigned to a Construction and Maintenance Department (CMD) Instrumentation and Electrical crew. A CMD Nuclear IAE Specialist evaluated the regulator and determined that it had been set to its maximum output of 60 psig in an attempt to achieve the required output pressure to the valve actuator of 75 to 125 psig. Because of the damaged regulator, the valve was not actuating through its full stroke.

The CMD Specialist contacted the NPD IAE Engineering Support Group for resolution of the issue of the undersized regulator for the job. The responsible

NPD IAE Staff Technical Specialist contacted the appropriate Projects Services Staff Engineer to discuss the method for replacement of all similar Feedwater valve regulators. Subsequently, the Technical Specialist wrote a Station Problem Report (SPR) to describe the problem, and recommended a solution. The SPR was then routed for approval. On July 19, 1988, approval had been obtained to initiate a Variation Notice (VN) and the SPR number was assigned. This number was provided to the CMD crew by the NPD IAE Staff Technical Specialist.

The CMD crew interpreted the assignment of the SPR number as authorization to replace the regulator. The Specialist installed a 35 to 100 psig regulator, increased the regulator output from 60 to 75 psig, cycled the valve to verify that it now fully stroked, and signed off the work request. The CMD Supervisor reviewed and signed the work request as completed on July 20, 1988. Since the work request indicated that no retest was required, no stroke timing of the valve was performed. The work request was completed and Operations personnel accepted operational control on July 21, 1988, at which time the Technical Specification violation started.

On July 22, 1988, the Projects Services Staff Engineer initiated a VN to authorize eight Feedwater valve regulators to be installed. After the VN was ready to be routed for approval, the Engineer contacted the CMD Specialist to inform him of the VN status. At this time, the CMD Specialist informed the Engineer that a new regulator had already been installed which was slightly different from the one specified in the VN. The Engineer modified the VN to match what was installed and routed the paperwork for review and approval. At this time, the Projects Services Engineer believed that the work request to replace the regulator was still outstanding and the valve was not in in service.

Performance personnel successfully conducted PT/l/A/4200/18A, CF Valve Monthly In-Service Test, on August 4, 1988, in which 1CF89 was stroke time tested which ended the Technical Specification violation. No change in the stroke time occurred from the previous test.

On August 7, 1988, the Unit was brought to Mode 5, Cold Shutdown, for S/G tube repairs. As the Unit was ready to return to Mode 4, Hot Shutdown, work on 1CF88, S/G 1C Containment Isolation Bypass Control valve, was required under a Performance work request to be completed before the mode change. This work could not be completed before installation of the new regulator had been completed per the VN. The VN package initiated on July 22, 1988, could not be found and on August 19, 1988, the VN package was reissued by the Projects Staff Engineer. At this time, it was suspected that an error in the installation of the 1CF89 regulator had occurred. Projects personnel reviewed the 1CF89 work request and determined the valve had been returned to service before the VN was issued which was a Technical Specification Violation. The Technical Specification violation occurred for 13 days,m from July 22 to August 4, 1988. This event was determined to be reportable on August 19, 1988.

CONCLUSION:

This incident has been attributed to a management deficiency, because the Construction Maintenance Department (CMD) IAE Supervisor did not follow the Maintenance Management Procedure. The Supervisor was informed a modification was required and should have returned the work request to Planning.

Additionally, the CMD crew had not been properly trained on the modification process. The personnel had been previously trained on the placement and removal of Temporary Station Modifications and had training on the procedures to install an approved modification. In neither of these was an understanding of the complete modification process brought out. Because of this lack of training, the CMD personnel did not recognize that the issuance of an SPR number did not constitute authorization to install a modification.

It was noted that the CMD Supervisor had been instructed to strongly pursue resolution of all assigned work requests and not to allow them to remain inactive. This prompted the Supervisor to deal more directly with projects personnel and the IAE Staff than was normal. This, however, resulted in bypassing Planning personnel who are responsible to pursue resolution of VNs in this situation.

Although the valve's closure time did not change from its previous 4.8 seconds, the maximum allowable time for the stroke is less than 5.0 seconds. The increased air mass in the actuator due to the increased pressure from the new regulator could require a longer time to escape when the valve closure was initiated. This could consequently lengthen the closure time.

Performance Management had issued a clarification of retest philosophy and had distributed it internally on November 20, 1986. This clarification delineated that any work which could affect the air supply from the regulator of an air operated valve would require a retest. This information was not provided to any other Station Groups.

A review of the Operating Experience Program database for Technical Specification violations involving inadequate implementation of Maintenance Management Procedures revealed that four previous incidents have occurred. One of these incidents described in LER 414/86-25 detailed CMD training deficiencies on Maintenance Management Procedure (MMP) 1.0. The corrective action for that incident was to initiate training on the MMP. This is the first incident since the initiation of that training which indicated inadequate understanding of the MMP. Therefore, this incident is considered to be nonrecurring.

A review of the Operating Experience Program database for Technical Specification violations involving inadequate training revealed three similar previous occurrences. Therefore, this incident involves a Technical Specification violation recurrence. However, none of these involved inadequate training on the modification program. Therefore, corrective actions for those previous incidents could not have prevented this event.

CORRECTIVE ACTION:

SUBSEQUENT

(1) Performance personnel successfully conducted PT/l/A/4200/18A and stroke time tested 1CF89.

(2) Projects services personnel implemented a Variation Notice to authorize the installation of the new regulator on 1CF89 and all other CF valves in the same application.

PLANNED

(1) Current valve retest determination philosophies (and future clarifications) will be provided to all appropriate Station Groups.

(2) All Planners will be trained on the clarified valve retest requirements issued by Performance.

(3) A Retest Manual which consolidates all requirements will be issued.

SAFETY ANALYSIS :

A review of Control Room Logs revealed no instances of cycling the untested 1CF89 valve from its safety position of CLOSED between July 19, 1988, when it was cycled to complete the work request and August 4, 1988, when the retest was conducted. During this period of time, the Unit remained in Mode 1, power operation, at 100% power and the valve was not required to operate. The subsequent retest proved that had the valve been open, it would have closed as required, upon receipt of a Containment Isolation Signal.

This incident is reportable pursuant to 10CFR 50.73, Section (a) (2) (i) (B).

The health and safety of the public were not affected by this incident.

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HAL B. Tucker
Vice President
Nuclear Production

DUKE POWER

September 16, 1988

Document Control Desk
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Subject: Catawba Nuclear Station, Unit 2
Docket No. 50-413
LER 413/88-22

Gentlemen:

Pursuant to 10 CFR 50.73 Section (a) (1) and (d), attached is Licensee Event Report 413/88-22 concerning a Technical Specification violation due to a failure to retest a containment isolation valve.

This event was considered to be of no significance with respect to the health and safety of the public.

Very truly yours,

Hal B. Tucker

LERZIRC8.D1/1cs

Attachment

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